

# **FIRST INFORMATION DISCLOSURE STATEMENT BY APPLICANT**

(use as many sheets as necessary)

Complete if Known

Application Number	10/622,652
Filing Date	July 21, 2003
First Named Inventor	Michael SETTON
Examiner Name	Unassigned
Attorney Docket Number	015290-756

Sheet

1

of

2

## **U.S. PATENT DOCUMENTS**

Examiner Initials	Document Number	Kind Code (if known)	Name of Patentee or Applicant of Cited Document	Issue/Publication Date (MM-DD-YYYY)
RP	3,731,163		Shukus	05-1993
RP	4,670,355		Matsudaira	06-1987
RP	4,734,340		Saito et al.	03-1988
RP	5,091,763		Sanchez	02-1992
RP	5,189,503		Suguro et al.	02-1993
RP	5,292,673		Shinriki et al.	03-1994
RP	5,316,977		Kunishima et al.	05-31-1994
RP	5,596,214		Endo	01-1997
RP	5,677,015		Hasegawa	10-1997
RP	5,688,724		Yoon et al.	11-1997
RP	5,702,972		Tsai et al.	12-1997
RP	6,107,656		Igarashi	08-2000

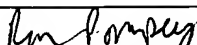
## **FOREIGN PATENT DOCUMENTS**

Examiner Initials	Document Number	Kind Code (if known)	Country	Date of Publication (MM-DD-YYYY)	Translation	
					Yes	No
RP	0844647	A3	EPO	05-1998		
RP	60-107838		JAPAN	06-13-1985		

## **NON-PATENT LITERATURE DOCUMENTS**

Examiner Initials	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.
RP	Alers, G.B. et al., "Nitrogen plasma annealing for low temperature Ta <sub>2</sub> O <sub>5</sub> films", Applied Physics Letters, vol. 72, no. 11, 1308-1310, 16 March 1998
RP	Campbell, S.A., et al., "MOSFET Transistors Fabricated with High Permittivity TiO <sub>2</sub> Dielectrics, IEEE Transactions on Electron Device, Vol. 44, No. 1, 104-109, January 1997.
RP	Cava, R.F. et al., "Enhancement of the dielectric constant of Ta <sub>2</sub> O <sub>5</sub> through substitution with TiO <sub>2</sub> ", Nature, Vol. 377, 215-217, 21 September 1995
RP	Chatterjee, A. et al., "Sub-100nm Gate Length Metal Gate NMOS Transistors Fabricated by a Replacement Gate Process", IEEE, 1997
RP	Gan, J.-Y et al., "Dielectric property of (TiO <sub>2</sub> ) <sub>x</sub> -(Ta <sub>2</sub> O <sub>5</sub> ) <sub>1-x</sub> thin films", Appl. Phys. Lett. 72 (3), 19 January 1998, 332-334
RP	Hu, J.C. et al., "Feasibility of Using W/TiN as Metal Gate for conventional 0.13μm CMOS Technology and Beyond", IEEE, 1997

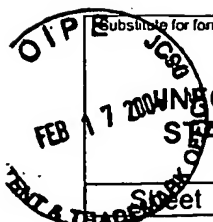
Examiner Signature



Date Considered

9-504

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with M.P.E.P. § 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.



Substitute for form 1449A/PTO & 1449B/PTO		Complete if Known	
<b>FIRST INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> (use as many sheets as necessary)		Application Number	10/622,652
		Filing Date	July 21, 2003
		First Named Inventor	Michael SETTON
		Examiner Name	Unassigned
		Attorney Docket Number	015290-756
Sheet	2	of	2

NON-PATENT LITERATURE DOCUMENTS	
Examiner Initials	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.
RP	Joshi, P.C., et al., "Structural and electrical properties of crystalline (1 - x) Ta <sub>2</sub> O <sub>5</sub> - xAl <sub>2</sub> O <sub>3</sub> thin films fabricated by metalorganic solution deposition technique", Apply. Phys. Lett. 71 (10), 8 September 1997, 1341-1343
RP	Lo, G.Q. et al., "Metal-oxide-semiconductor characteristics of chemical vapor deposited Ta <sub>2</sub> O <sub>5</sub> films, Appl. Phys. Lett. 60 (26), 3286-3288, June 1992.
RP	Meng, J.F., et al., "Raman Investigation on (Ta <sub>2</sub> O <sub>5</sub> ) <sub>1-x</sub> (TiO <sub>2</sub> ) <sub>x</sub> System at Different Temperatures and Pressures", J. Phys. Chem Solids, Vol. 58, No. 10, 1503-1506, 1997
RP	Momiyama, Y., et al., "Ultra-Thin Ta <sub>2</sub> O <sub>5</sub> /SiO <sub>2</sub> Gate Insulator with TiN Gate Technology for 0.1µm MOSFETs", 1997 Symposium on VLSI Technology digest of Technical Papers
RP	Properties of Metal Silicides, INSPEC emis datareviews series No. 14, 1995, Maex and Van Rossum Editors, pp 103-104
RP	Ting, C.Y., et al., "Gate Materials Consideration for Submicron CMOS", Applied Surface Science 38 (1989) 416-428
RP	Ushiki T., et al., "High-Performance, Metal-Gate SOI CMOS Fabricated by Ultraclean, Low-Temperature Process Technologies", SPIE, Vol. 2875, pp 28-38, Aug. 1996
RP	Vogel, E.M., et al., "Modeled Tunnel Currents for High Dielectric constant Dielectrics", IEEE Transactions on Electron Devices, Vol. 45, No. 6, 1350-1355, June 1998.
RP	Pratt, I.H., "Thin-Film Dielectric Properties of R.F. Sputtered Oxides", Solid State Technology, (Dec. 1969), vol. 12, no. 12, 49-57
RP	Reddy, P.K, et al., "Dielectric Properties of Tantalum Oxynitride Films", Physica Status Solidi A, July 1979, vol. 54, no. 1, pages K63-K66
RP	Vlasov, Y.G. et al., "Analytical applications of pH-ISFETs", Sensors and Actuators B, (Dec. 1992) vol. B10, No. 1, pages 1-6.
RP	Patent Abstracts of Japan, vol. 098, no. 011, September 1998, JP 10 178170A
RP	Chinese Official Action dated April 18, 2003 for Application No. 99808151.5

Examiner Signature		Date Considered	9-5-04
--------------------	--	-----------------	--------

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with M.P.E.P. § 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.